



IFW

Docket No.: 1268-211

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Amichai BEN ARI

U.S. Patent Application No. 10/749,568

Filed: January 2, 2004

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Group Art Unit: 2629

Examiner: Nitin Patel

For: A METHOD FOR PROJECTING SIGNS ON PRINTED MATTER AND MEANS FOR
THE SAME

TRANSMITTAL OF CERTIFIED PRIORITY DOCUMENT

Commissioner for Patents
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Sir:

At the time the above application was filed, priority was claimed based on the following
application:

Israel Application No. 153783, filed January 2, 2003.

A copy of the priority application is enclosed. Acknowledgement is respectfully
requested.

Respectfully submitted,

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חוק הפטנטים התשכ"ז-1967
PATENTS LAW, 5727-1967

מספר: Number	153783
תאריך: Date	02-01-2003
הוקדם/נדרח: Ante/Post-dated	

בקשה לפטנט
Application for Patent

אני, (שם המבקש, מענו - ולגבי גוף מאוגד - מקום התאגדותו)
I (Name and address of applicant, and, in case of a body corporate, place of incorporation)

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ששמה הוא:
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בעל אמצאה מכה הדין
of an invention, the title of which is:

שיטה להשלכה של אותות על דבר דפוס ואמצעים לכך

(בעברית)
(Hebrew)

A METHOD FOR PROJECTING SIGNS ON PRINTED MATTER
AND MEANS FOR THE SAME

(באנגלית)
(English)

הממציא: עמיחי בן ארי
Inventor: Amichai Ben Ari

hereby apply for a patent to be granted to me in respect thereof.

מבקש בזאת כי ינתן לי עליה פטנט.

* בקשת חלוקה - Application for Division		* בקשת פטנט מוסף Application for Patent of Addition		* דרישת דין קדימה Priority Claim	
* מבקשת פטנט from Application		* לבקשה / לפטנט To Patent/Appl.		מספר/סימן Number/Mark	תאריך Date
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שיטה להשלכה של אותות על דבר דפוס ואמצעים לכך

A METHOD FOR PROJECTING SIGNS ON PRINTED MATTER
AND MEANS FOR THE SAME

ממציא:

עמיחי בן ארי

FIELD OF THE INVENTION

The present invention generally relates to a method for projecting signs on a printed matter. More specifically, the present invention relates to a method to project signs such as cantillation, vowel and punctuation marks; as well as any other required inserts. In particular, the present invention relates to a method to project said inserts and cantillation marks on a torah book, to a device adapted to said projection and to a projecting method.

BACKGROUND OF THE INVENTION

The Jewish torah scroll is written in biblical Hebrew. For thousands of years, the bible has been copied by experts, without changing anything in the text or in its appearance, e.g., keeping the stiff roles of the fonts size and type etc. The bible text is read three times a weeks, and on holidays. This ancient text is hard to read to those that are not skilled in the art, known by the Hebrew term *baaley qria*. Various symbols were added over the years to didactic biblical texts, some of them are the cantillation marks which are diacritic symbols annotating the text for the purpose of cantillation. Those marks are also known in Hebrew by the term *'ta'amey hamiqra'* and used to indicate how a text is to be chanted or sung. The cantillation marks are adapted to have interpretative means how to read the word, how to understand the sentence, how to sing or chant the phrase and to provide an absolute unity in reading the bible text, so that non-traditional reading of the text is unaccepted. The biblical text is also poor in vowel and punctuation marks, thus requiring an acknowledged amount of experience in the text in order to read it and to understand it properly. Because no writing is allowed on the holly scroll, every student reading the text today is obligated to memorized the chant of reading the text by heart, by repeating along with either his Rabbi or by repeating a recording of a *baaley qria* numerous times.

As the years pass, less and less people are trained and skilled in the art of reading the torah in the traditional orthodox manner. Thus, only few such *baaley qria* are available to serve the community. Additionally, the daily time-table of the modern life does not provide sufficient time for those who know to read the bible text, to prepare the reading, so the quality, unity and thus the current availability of said reading is

significantly reduced. A simple, convenient and reliable way for reading the torah, especially in a manner acceptable by Jewish orthodox Rabbis, is thus strongly desired.

BRIEF DESCRIPTION OF THE FIGURES

In order to understand the invention and to see how it may be carried out in practice, a preferred embodiment will now be described, by way of non-limiting example only, with reference to the accompanying drawing, in which

Figure 1 presents a copy of a part of a Jewish torah scroll comprising no punctuation marks;

Figure 2 presents a transparent sheet comprising cantillation marks coordinated with said torah text; and

Figure 3 presents a projected view of the torah text comprising the cantillation marks;

Figure 4 schematically presenting a scrolling device on first page, without projection of signs; and

Figure 5 schematically presenting the said scrolling device on second page, after the projection of signs; and

Fig. 6A schematically presenting one transparent sheet accommodated in a frame and
Fig. 6B schematically presenting an array of multiple transparent sheets accommodated in a pager.

Figure 7 schematically presenting a block diagram of a program adapted to project cantillation marks on traditionally written bible texts.

SUMMARY OF THE INVENTION

It is thus the main goal of the present invention to provide a useful method for projecting signs on top of a printed matter. Said method comprising the steps of providing said printed matter in a manner suitable for said projection. Then, said signs are been prepared on a transparent sheet in the manner said signs are in coordination with said printed matter. Lastly, said signs are projected on top of said printed matter such that said signs are incorporated with the printed matter in a predetermined manner.

It is in the scope of the present invention wherein the printed matter is a traditional torah scroll written by hand and further wherein the projected signs are cantillation marks. Moreover, those signs are preferably selected from cantillation marks (i.e., in Hebrew: *Teamey Mikra*), vowel marks, punctuation marks, and/or musical notes. It is also in the scope of the present invention wherein the said signs are means for editing the printed matter to be more readable. Similarly, those signs are preferably selected from page number, header and/or footer, symbols, graphical signs, references and links, proofreading signs, the last word of previous page, the first word of coming page and/or the queue for reading the torah (i.e., in Hebrew: *aliya latorah*). Alternatively or additionally, aforementioned signs are selected from Braille notes, text printed in various languages, colors, sizes and fonts, pictures and/or drawn animations. It is acknowledged that a plurality of insertion layers is to be projected on top of the printed manner.

It is also in the scope of the present invention to provide a useful method, especially adapted for computerized projecting of signs on top of printed matter. Said method comprising the following seven steps: (i) scanning the printed matter such in a way the text is restored in a file. (ii) A database comprising a list of sign to be incorporated into the said text is obtained. (iii) A character or a plurality of characters from the said text file is also retrieved. (iv) A sign or a plurality of signs is retrieved from the said database. (v) Said conjugated character-sign couple is compared with a reference character-sign couple. (vi) Said conjugated couple is fitted or not fitted in a loop such in the way that all the text is projected by the coordinated signs. Lastly, in step (vii) the enriched text is projected by the coordinated signs.

It is still in the scope of the present invention to present a transparent polymeric sheet member adapted to project signs on top of a printed matter in the method defined in any of the above. Said sheet may be a composition of a plurality of stripes, projecting said signs mostly the line of the text and not the spaces between lines.

Lastly, it is also an aim for the present invention to present a scrolling device useful for coordinate the projecting sheet member on the printed matter so signs are projected on top of the printed matter with coordination with the text. Said device preferably comprising a first roll and a second roll, wherein a long projecting sheet

member is accommodate in between, and further wherein at least one of said rolls is having means to roll the sheet so each of the pages of the printed matter is fitting a known portion of the signs.

DETAILED DESCRIPTION OF THE INVENTION

The following description is provided, along all chapters of the present invention, so as to enable any person skilled in the art to make use of said invention and sets forth the best modes contemplated by the inventor of carrying out this invention. Various modifications, however, will remain apparent to those skilled in the art, since the generic principles of the present invention have been defined specifically to provide the method for projecting insertion on printed matter.

The present invention generally relates to a method for projecting signs on a printed matter. Said printed matter is generally selected from any book, handbook, textbook, reference book, encyclopedia, notebook and especially any pedagogic written media. In the core of the present invention, said printed matter is a traditional Jewish torah scroll (i.e., in Hebrew: *Sefer Torah*), wherein the text of the bible is written by the hand of an expert (i.e., in Hebrew: *Sofer Stam*).

More specifically, the present invention relates to a method to project signs such as cantillation, vowel and punctuation marks on an original text. Said text is usually written by hand, such as the traditional Jewish bible scrolls, musical notes etc. In addition, those inserts are selected from various editing notes. Said notes are selected, yet not limited to a page number, references and links, proofreading, header and footer etc. More over, those insertion been projected on top of the text may be selected from Braille notes, symbols, graphical signs and/or pictures. In particularly, said inserts may be also selected from any musical notations, such as clefs, scales, notes, harmony and/or chord indications etc.

Reference is made now to figure 1, presenting a copy of a part of a Jewish torah scroll having neither punctuation, cantillation nor vowel marks. Figure 2 presents a transparent sheet comprising cantillation marks coordinated with said torah text. Figure 3 presents a projected view of the torah text comprising the cantillation marks;

As set forth, it is in the scope of the present invention to provide a useful method to project aforementioned inserts on top of a torah book. As one can see in figure 1-3, each page of said scroll comprises 48 to 60 lines in a page and 35 to 55 characters in one line, a transparent sheet adapted for overhead projector is mostly suitable. A polyethylene terphthalate made sheet is suitable for this instance. For various instances, a laminated film as such as polyester is suitable. Alternatively, a strip of self-adherent polymer is to be used.

Said polymeric sheet may be adapted for a singular use or alternatively, said sheet may be adapted for a continuous use. Such a continuous use is provided by means of a fixed or mobile rolling device. The said roll is adapted to use an elongated polymeric sheet, accommodated in a suitable cartridge. Reference is thus made now to Fig. 4 schematically presenting a traditionally handmade bible scroll comprising a first roll (41a) and a second roll (41b). Said rolls are operated by means of set of handles (such as 42) in the direction (43). The biblical text (44) is delivered from the first roll to the second one.

A mobile rolling device as defined above is located adjacent to the said bible scroll. Said device comprises of a frame (45) located under the biblical text. A transparent long sheet (47) is delivered from a first roll (46a) towards a second roll (46b) by means of handle (47), rotated in a 360° movement in the direction (48) so the transparent sheet is moving downwards (49). To coordinate the insertion printed on sheet (47) with the biblical text (44) is easily provided by means dashed line (47a) indicating the proper place of the sheet on top of the text.

Subsequently, reference is made now to figure 5, presenting the very same roller, whereat the text was rolled to a certain page, and further wherein the cantillation marks are projected on top of the text of the said page.

Reference is now made to Fig. 6A schematically presenting a device adapted to project cantillation marks or any other signs as defined in the present invention, said device comprises of a relatively rigid frame (61) accommodating a transparent sheet (62) whereat said cantillation and/or signs are written or printed (63). According to

one embodiments of the present invention, anchoring devices are appended to said frame so that device is suitable to be appended upon the printed matter at any position. Said embodiment is especially useful to be used in that torah scroll that is to be open to to be read in a perpendicular orientation.

Reference is still made to Fig. 6B schematically presenting a pager having note-pad characteristics. In this embodiment of the present invention, a plurality of transparent sheets (66A-D) are clasped or held in one of their rims by a mutual holder (65). Each of said sheets contains signs or cantillation to be projected over a subsequent page of the printed matter and/or torah scroll.

Reference is lastly made to Fig. 7 schematically presenting a simplified block diagram of the method for projecting signs, as such as cantillation marks on top of a printed matter, as such as a traditional handmade biblical scroll. Said printed matter may be already scanned or it is scanned (71) to a file. It is acknowledged that in many cases, expensive biblical scrolls are scanned in order to identify them in case of theft and additionally or alternatively, said scrolls are scanned to detect mistakes in the written text. Subsequently or in parallel, said cantillation marks of the original text is restored in a cantillation database (72). A character, a word or any suitable phrase of the original text (73) and a cantillation mark or a plurality of such marks (74) correlated to said characters are provided and subsequently compared (75) with a reference file comprising a character and its conjugated mark. The identity of the couple is now tested (76). In case the mark is not fitting the character, a mistake announcement is to be presented (77). If the user is allowing the correlation, the very same overlapping is provided (78). If the user does not allow the correlation, the process is stopped (79). The character is to be fitted with the cantillation mark or with any other sign as defined above (80). At the end of the page (81) of the original text the loop is continue until the end of the text (82) or the next page is been processed (83).

It is further in the scope of the present invention wherein the aforementioned scanning step (71) may be verified by other know techniques, such as photocopying the printed matter by any suitable means and processing said text by an OCR program so a text file is obtained.

CLAIMS

1. A method for projecting signs on top of a printed matter comprising;
 - a. providing said printed matter;
 - b. preparing said signs on a transparent sheet in the manner said signs are in coordination with said printed matter;
 - c. projecting said signs on top of said printed matter such that said signs are incorporated with the printed matter in a predetermined manner.
2. The method according to claim 1, wherein the printed matter is a traditional torah scroll written by hand and further wherein the projected signs are cantillation marks.
3. The method according to claim 1, wherein the signs are selected from cantillation marks, vowel marks, punctuation marks, and/or musical notes;
4. The method according to claim 1, wherein the signs are means for editing the printed matter to be more readable.
5. The method according to claim 4, wherein the signs are selected from page number, header and/or footer, symbols, graphical signs, references and links, proofreading signs, the last word of previous page, the first word of coming page and/or the queue for reading the torah.
6. The method according to claim 4, wherein the signs are selected from Braille notes, text printed in various languages, colors, sizes and fonts, pictures and/or drawn animations.
7. The method according to claim 1, wherein a plurality of insertion layers are projected on top of the printed manner.

8. The method according to claim 1, especially useful for computerized projecting of signs on top of printed matter, comprising the following steps:
 - a. scanning the printed matter such in a way the text is restored in a file;
 - b. obtaining a database comprising an list of sign to be incorporated into the said text;
 - c. retrieving a character or a plurality of characters from the said text file;
 - d. retrieving a sign or a plurality of signs from the said database;
 - e. comparing said conjugated character-sign couple with a reference character-sign couple;
 - f. fitting or not said conjugated couple in a loop such in the way that all the text is projected by the coordinated signs;
 - g. presenting the enriched text with the coordinated signs.
9. The method according to claim 8, wherein the scanning step is replaced by the steps comprising:
 - a. photocopying and or scanning the printed matter so a file comprising said copied or scanned text is obtained;
 - b. translating the said file text by means of a OCR program so a text file is obtained.
10. A transparent polymeric sheet member adapted to project cantillation marks and/or signs on top of a printed matter in the method defined in claim 1 or in any of the preceding claims.
11. The projecting sheet member according to claim 10, wherein said sheet is a composition of a plurality of stripes, projecting said signs mostly the line of the text and not the spaces between lines.
12. The projecting sheet member according to claim 10, framed in a relatively rigid frame or envelope.
13. The framed projecting sheet member according to claim 12, additionally comprising means to anchor said member to the printed matter.

14.A scrolling device having a note-pad means to scroll the projecting sheet member according to claim 10.

15.A scrolling device useful to coordinate the projecting sheet member according to claim 10 on the printed matter so signs are projected on top of the printed matter with coordination with the text; said device comprises a first roll and a second roll, wherein a long projecting sheet member is accommodate in between, and further wherein at least one of said rolls is having means to roll the sheet so each of the pages of the printed matter is fitting a known portion of the signs.



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FIGURE 1

מג

ויהיו זלם עוד זלום אזר ויספר אתו לאזיו ויאמר
הנה זלמתי זלום עוד והנה השמש והירח ואזר
עשר כוכבים משתזזים לי ויספר אל אביו ואל
אזיו ויגער בו אביו ויאמר לו מה הזלום הזה אשר
זלמת הבוא נבוא אנני ואמך ואזיך להשתזזות
לך ארצה ויקנאו בו אזיו ואביו שמר את הדבר
וילכו אזיו לרעות את צאן אביהם בשכם ויאמר
ישראל אל יוסף הלוא אזיך רעים בשכם לכה
ואשלחך אליהם ויאמר לו הנני ויאמר לו לך נא
ראה את שלום אזיך ואת שלום הצאן והשבני
דבר וישלחו מעמק זברון ויבא שכמה וימצאו
איש והנה תעה בשדה וישאלהו האיש לאמר
מה תבקש ויאמר את אזי אנכי מבקש הגידה
נא לי איפה הם רעים ויאמר האיש נסעו מזה כי
שמעתי אמרים נלכה דתנינה וילך יוסף אזר אזיו
וימצאם בדתן ויראו אתו מרזק ובטנם יקרב
אליהם ויתנכלו אתו להמיתו ויאמרו איש אל אזיו
הנה בעל הזלמות הלזה בא ועתה לכו ונהרגהו

FIGURE 2

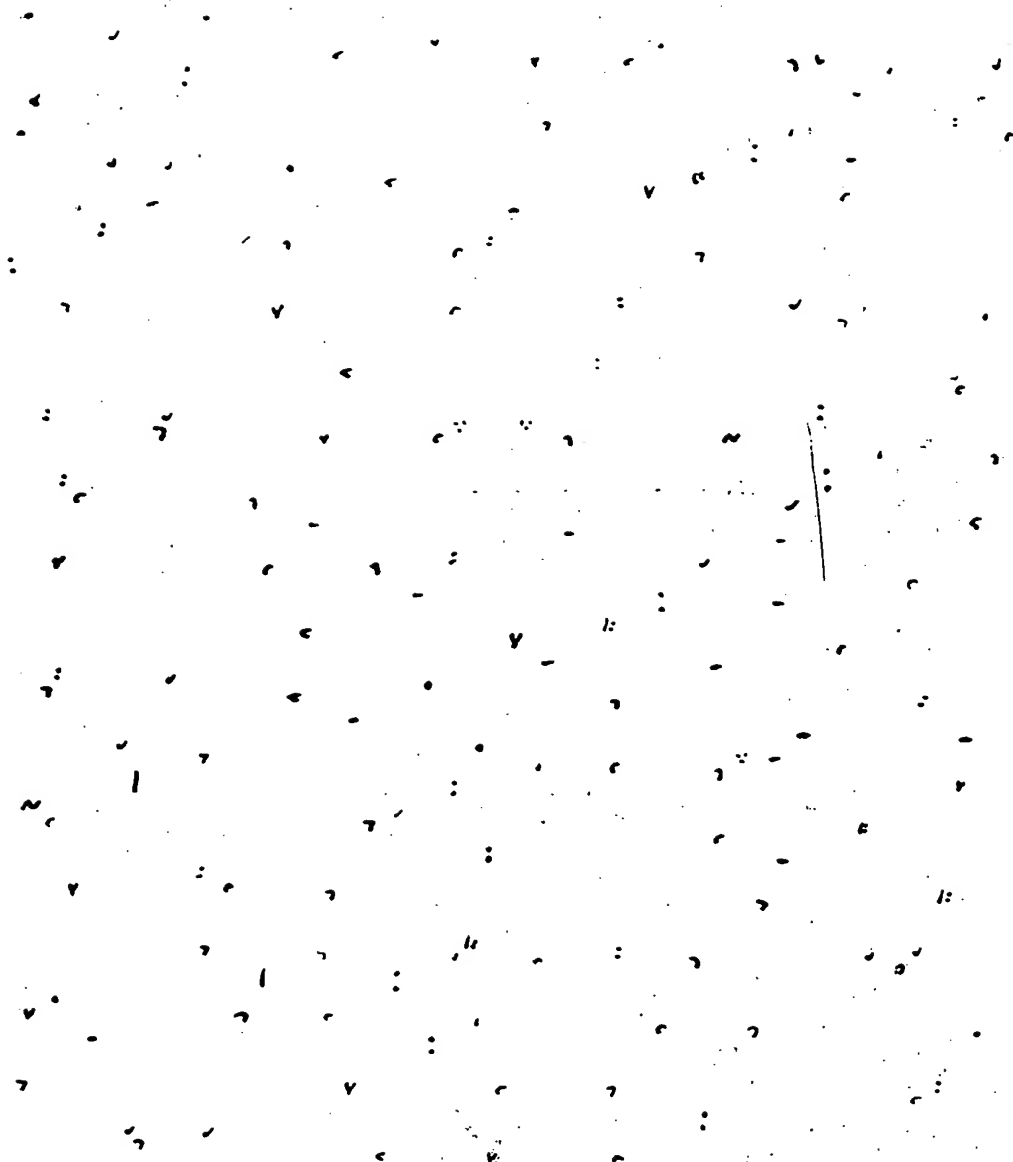


FIGURE 3

ז' וישב

מג

ויחלם עור' חלום אחר ויספר אתו לאוזניו ויאמר
הנה חלמתי חלום עוד והנה העמש והירח ואחור
עשר כוכבים משתחווים לי: ויספר אל אביו ואל
אחיו ויגער בו אביו ויאמר לו מה החלום הזה אשר
חלמת הבוא גבוא אנני ואמך ואחייך להשתחנות
לך ארצה: ויקראו בו אוזניו ואביו שמר את הדבר:
וילכו אוזניו לרעות את צאן אביהם בשכם: ויאמר
ישראל אל אל יוסף הלוא אחייך רעים בשכם לכה
ואשלחך אליהם ויאמר לו הגגלי: ויאמר לו לך נא
ראה את שלום אחייך ואת שלום הציאן והשבני
דבר וישלחהו מעמק חברון ויבא שכמה: וימצאהו
איש והנה תעה בשדה וישאלהו האיש לאמר
מה תבקש: ויאמר את אחי אנכי מבקש הגידה
נא לי איפה הם רעים: ויאמר האיש נסעו מזה כי
שמעתי אמרים ללכה דתלנה ולך יוסף אחור אוזניו
וימצאם בדתן: ויראו אתו מרחק ובטרום יקרב
מלפניהם ויחברלו ויבאו אליו ויאמרו לו נא

FIGURE 4

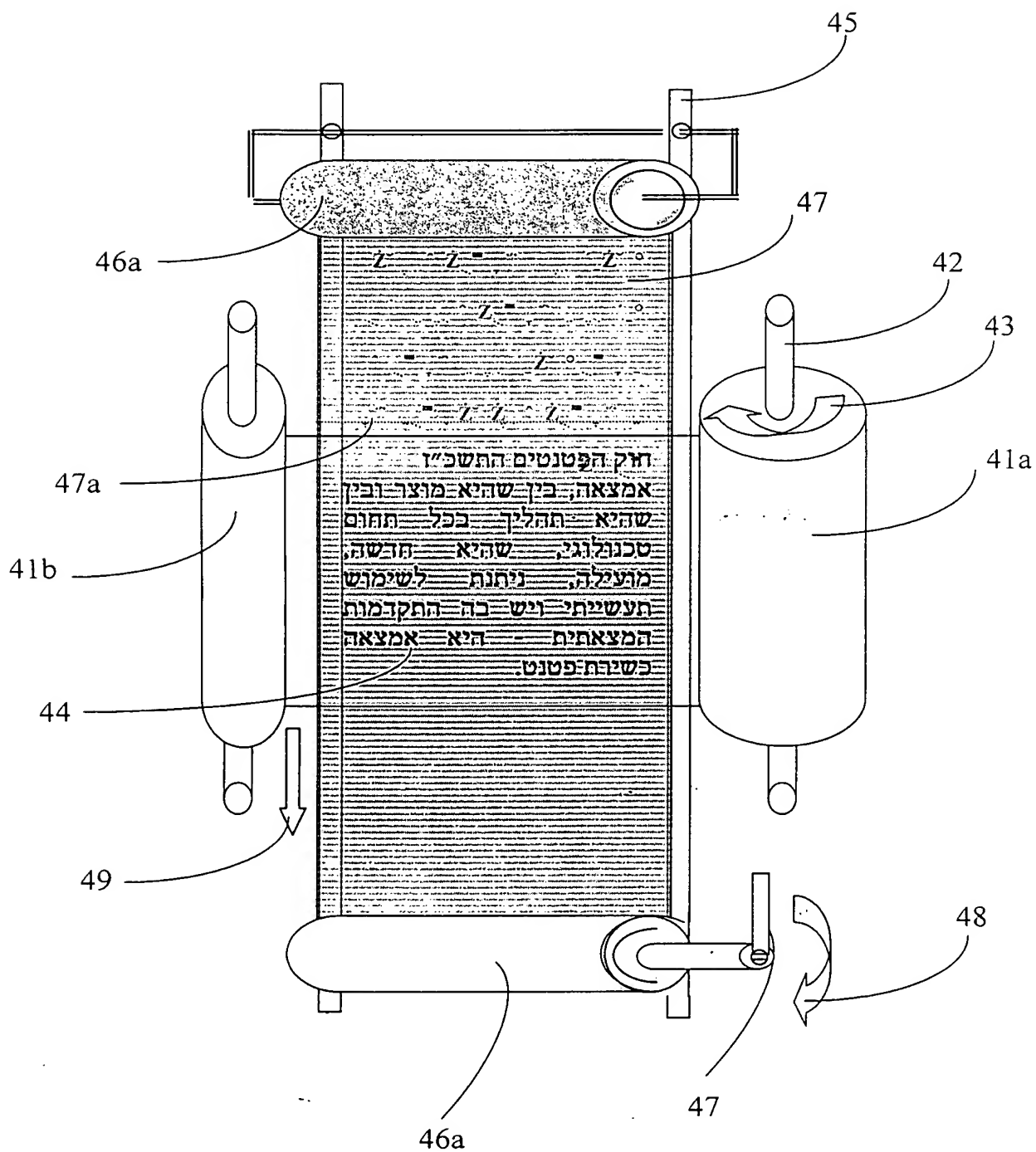


FIGURE 5

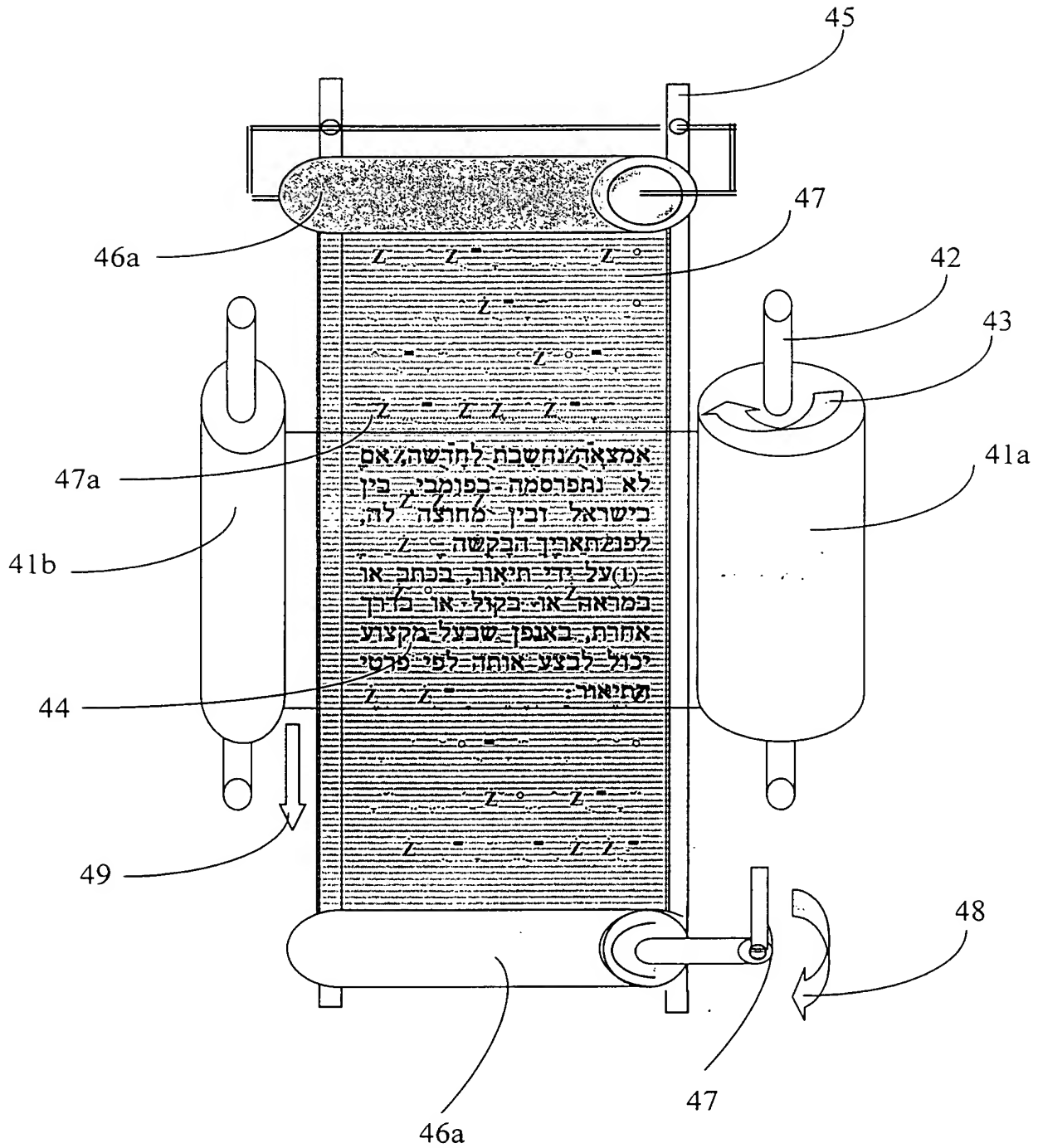
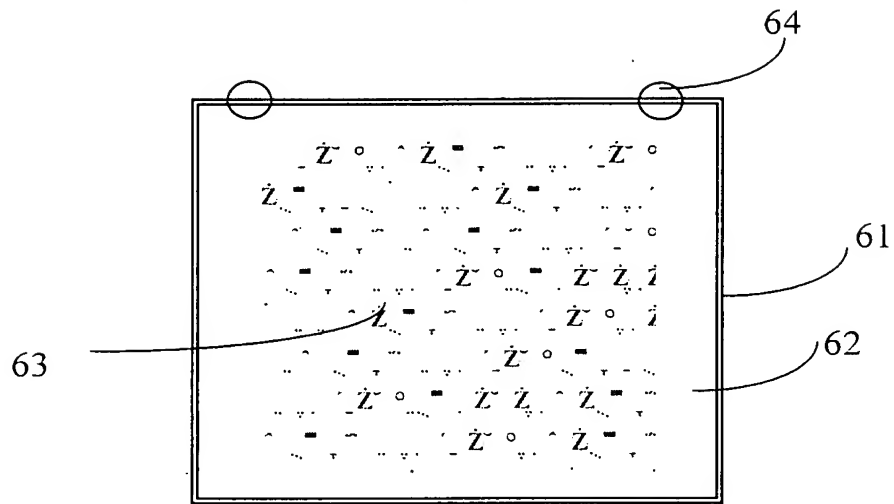
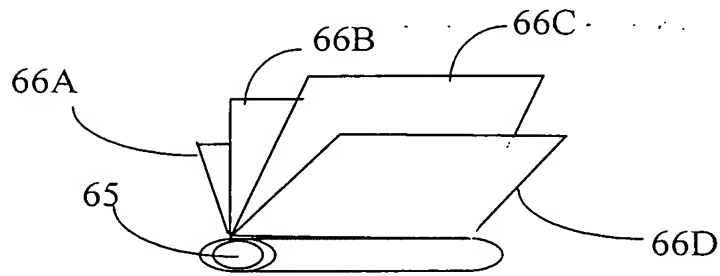


FIGURE 6



A



B

FIGURE 7

